The following listing of the claims will replace all prior versions and all prior listings of the claims in the present application:

Listing of The Claims:

1. (Currently Amended) An *in vitro* method for selective electrofusion of a mammalian cell and a fusion partner having a cell-like membrane, comprising:

A) selecting the mammalian cell and the fusion partner;

B) bringing into contact the mammalian cell and the fusion partner;

C) providing an electric field using at least one microelectrode, which is of a strength sufficient to obtain fusion of the mammalian cell and the fusion partner, wherein the electric field is between 0.1 – 10 kV/cm, and is positioned 0 – 100 μm from the mammalian cell and the fusion partner, wherein said at least one microelectrode is positioned by use of a microscope, at least one micropositioner and/or a stereotactic device, wherein at least one microelectrode is sufficiently small to permit the selective fusion of only the mammalian cell and the fusion partner~~, and the electric field minimizes the risk for unwanted fusion of surrounding cells~~.

2. (Previously Presented) A method according to claim 1, wherein only one microelectrode, sufficiently small to permit the selective fusion of the mammalian cell and fusion partner, is used to provide the electrical field in step B.

3. (Previously Presented) A method according to claim 1, wherein two microelectrodes, sufficiently small to permit the selective fusion of the mammalian cell and fusion partner, are used to provide the electrical field in step B.

4. (Previously Presented) A method according to claim 1, wherein one electrode movably mounted on a microchip is used to provide the electrical field in step B.

5. (Previously Presented) A method according to claim 1, wherein several electrodes movably mounted on a microchip are used to provide the electrical field in step B.

6. (Previously Presented) A method according to claim 4, wherein one electrode(s) is (are) movably mounted on a microchip of a suitable design for combinatorial synthesis of fusion products.

7. (Cancelled)

8. (Previously Presented) A method according to claim 2, wherein at least one microelectrode that is hollow, electrolyte-filled, and sufficiently small to permit the selective fusion of the mammalian cell and fusion partner, is used to provide the electrical field in step B, and said microelectrode is also used to deliver fusion partners or chemical agents by electroendoosmosis, electrophoresis, or by Poiseuille flow.

9. (Previously Presented) A method according to claim 2, wherein the outer diameter of said electrode is sufficiently small to permit the selective fusion of the mammalian cell and fusion partner without affecting nearby structures, such as cells, liposomes, and proteoliposomes.

10. (Previously Presented) A method according to claim 9, wherein the outer diameter of said electrode is 1-100 μm.

11. (Previously Presented) A method according to claim 2, wherein at least one electrode is used, for delivery of the mammalian cell or fusion partner to the fusion site.

12. (Previously Presented) A method according to claim 2, wherein step A is performed by use of the electrodes.

13. (Previously Presented) A method according to claim 1, wherein step A is performed by use of optical trapping.

14. (Previously Presented) A method according to claim 1, wherein step A is performed by use of micropipettes.

15. (Previously Presented) A method according to claim 1, wherein the fusion partner is selected from the group consisting of a single cell, a liposome, a proteoliposome, a synthetic vesicle, an egg cell, and an enucleated egg cell.

16. (Cancelled)

17. (Previously Presented) A method according to claim 1, wherein the mammalian cell or the fusion partner is provided in a buffer prior to step B.

18. (Previously Presented) A method according to claim 1, wherein at least one of the mammalian cell or the fusion partner has been immobilized prior to step A.

19. (Previously Presented) A method according to claim 1, wherein one of the mammalian cell or fusion partner is part of a cellular network.

20. (Previously Presented) A method according to claim 1, wherein at least one of the mammalian cell or fusion partner has been electroporated in a buffer prior to step A.

21. (Previously Presented) A method according to claim 1, wherein at least one of the mammalian cell or fusion partner has been exposed to a dielectrophoretic field in a buffer prior to step A.

22. (Previously Presented) A method according to claim 1, wherein at least one of the mammalian cell or fusion partner has been treated by an agent that promotes close cell-cell contacts.

23. – 30. (Cancelled)

31. (Previously Presented) A method according to claim 2, wherein one electrode movably mounted on a microchip is used to provide the electrical field in step B.

32. (Previously Presented) A method according to claim 3, wherein several electrodes movably mounted on a microchip are used to provide the electrical field in step B.

33. (Previously Presented) A method according to claim 5, wherein the electrodes are movably mounted on a microchip of a suitable design for combinatorial synthesis of fusion products.

34. (Cancelled)

35. (Cancelled)

36. (Previously Presented) The method of claim 1, wherein said mammalian cell is a tumor cell.

37. (Previously Presented) The method of claim 1, wherein said mammalian cell and said fusion partner are not a sperm cell.

38. (Currently Amended) An *in vitro* method for selective electrofusion of a target cell and a fusion partner, comprising:

A) selecting the target cell and the fusion partner, wherein both the target cell and fusion partner are selected from the group consisting of a single mammalian cell, a liposome, a proteoliposome and a synthetic vesicle;

B) bringing into contact the mammalian cell and the fusion partner;

C) providing an electric field using at least one microelectrode, which is of a strength sufficient to obtain fusion of the target cell and the fusion partner, wherein the electric field is between 0.1 – 10 kV/cm, and is positioned 0 – 100 µm from the target cell and the fusion partner, wherein said at least one microelectrode is positioned by use of a microscope, at least one micropositioner and/or a stereotactic device, wherein at least one microelectrode is sufficiently small to permit the selective fusion of the target cell and the fusion partner~~, and the electric field minimizes the risk for unwanted fusion of surrounding cells~~.

39. (Previously Presented) The method of claim 1 or claim 38, where in the microelectrode is positioned 0 – 10 µm from the mammalian cell and the fusion partner.

40. (Previously Presented) The method of claim 1 or claim 38, where the electric field is provided for durations of 10 µs to 5 seconds.